

COKE SPECIAL

IT ALL BEGINS HERE

By ROBERT E. BEDINGFIELD

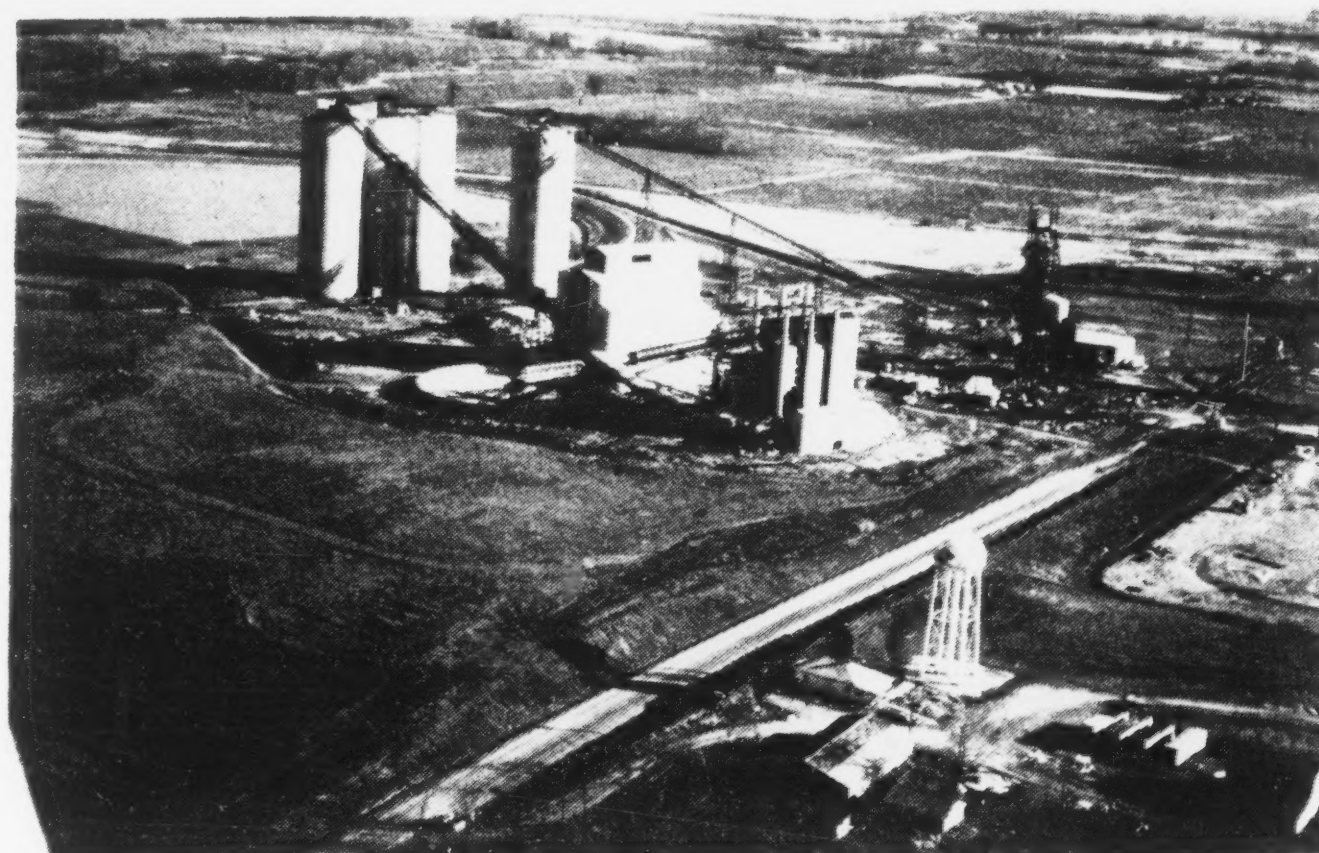
McLEANSBORO, Ill. — Anyone who still believes that coal mining engages gaunt and grimy workers gnawing at coal seams with picks in the flickering light of a Davy lamp has a surprise waiting for him here in Illinois' newest and deepest mine under the rich farmlands of Hamilton County.

Well-paid workers — \$86 a day in wages and \$8,000 a year in benefits — standing erect in corridors 7 feet high — superintend the action of huge machines, called continuous miners that tear coal out of 6-foot coal seam walls at a rate of 8 to 12 tons a minute. The continuous mining machines also convey and load the coal into waiting shuttle cars to be hauled to belts that

single mining crew underground on each of three shifts now is driving "entries" — passages for ventilation, access and coal removal from the base of the production shaft by systematically removing the coal.

The mine, according to Inland's representatives who guided newspaper and magazine reporters through the project last month, will be developed by room and pillar mining. It was explained that by this method large "rooms" will be mined out of the 6-foot coal seam, leaving blocks of unmined coal behind to support the overburden.

Production of clean coal, with a sulphur content of 1.25 percent, from Mine No. 2 currently is averaging about 250



NEWEST IN ILLINOIS, Inland Mine No. 2, incorporates the most modern technology. When operating fully, it will ship 2.5-million tons of metallurgical coal a year to the Indiana Harbor Works at East Chicago.



CONTINUOUS MINER CHEWS INTO COAL SEAM 925-feet below the Illinois prairie at Inland Steel's Mine No. 2 at up to 12 tons a minute.

dump it into huge steel containers, called skips, that finally hoist the coal to the surface. The brightness of the tunnels is provided largely by high-powered rechargeable lamps worn by the mine workers atop their hard hats. The light of the lamps bounces off white ceiling, wall and floor surfaces resulting from the constant spraying of crushed limestone to keep down the coal dust and also to prevent combustion by diluting the coal dust below its explosive potential.

The mine is a captive facility of the Inland Steel Company and the only mine in the state dedicated to producing only metallurgical coal. Over the next 40 years it is expected to produce 100-million tons of low-sulphur metallurgical coal for Inland Steel's Indiana Harbor coke ovens in East Chicago, Ind. The resultant coke will be used to fuel Inland's No. 7 blast furnace, scheduled to begin production in 1980. One of the two largest in the Western Hemisphere, No. 7 furnace will supply the molten pig iron for a scheduled 13 percent increase in Inland's raw steel capacity, to 9.3-million tons.

Underground development of Mine No. 2 — its only name — began March 15 in the Harrisburg No. 5 coal seam, 925 feet below ground, when the first production crew began driving passageways from the base of the materials shaft to connect the personnel and production shafts 900 feet away to the Northeast. With the personnel shaft recently linked to the other two, the

tons a day. So far the mine has sent some 30,000 tons North to East Chicago. But at full production in 1983, said Inland spokesmen, with 10 processing units (a unit, it was explained, is a continuous mining machine, a roof bolting machine, two shuttle cars and support equipment), the mine's processing facilities on the surface will ship a 90-car unit train each day, carrying 9,000 tons of coal, to East Chicago. Total annual production, scheduled for 1983, will reach 2.5-million tons, with over 600 workers, up from the present 110.

Inland Steel's spokesmen decline to disclose the cost of Mine No. 2 other than to say that the mine is the "coal component" of a \$1-billion expansion program the company currently has underway. Construction of the mine was started in May, 1975, 8 years after the company's Mine No. 1, 30 miles West of here in Sesser, Ill., began production.

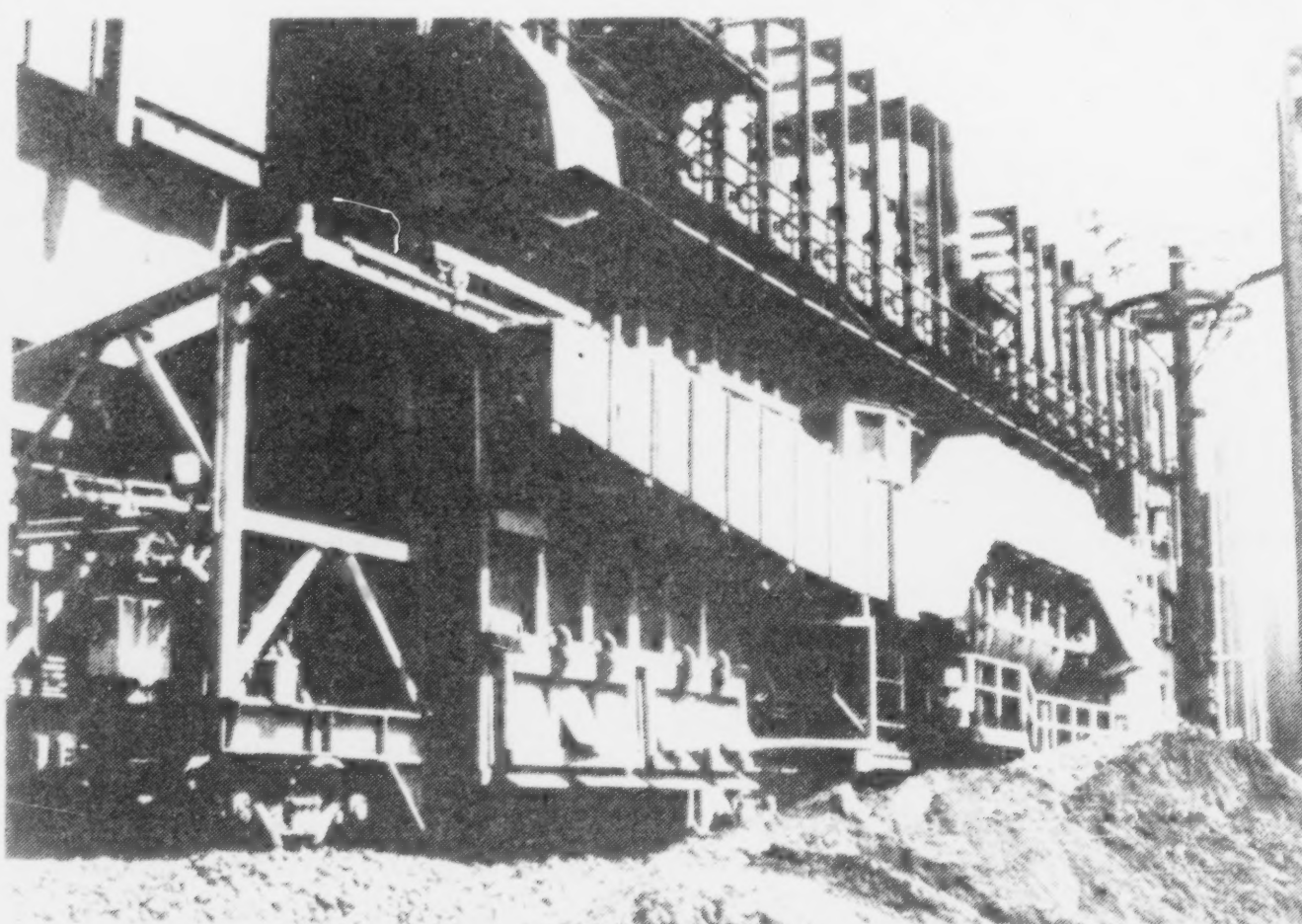
Also rated at 2.5-million tons a year No. 1 mine, Inland's spokesmen say, was built "at one-fourth the cost of Mine No. 2." Again questions as to the dollar cost are turned aside. About 18 percent of the output of the No. 1 mine is steam coal used in Inland's electric generating plant at East Chicago. The sulphur content of the coal from the No. 1 mine is one percent.

Inland has a third coal investment in Illinois, a leased undeveloped tract, about 100 miles Northeast of McLeansboro, near the Indiana border, just West of Terre Haute. The deposit con-

tains some 200-million tons of high-volatile coal, much of it low in sulphur content and of metallurgical quality.

At a briefing of the media prior to the tour of Mine No. 2, Carl B. Jacobs, vice president — raw materials of Inland, noted that the company's Illinois' coal

operations afforded it some major cost savings. "Our coal transportation costs," said Mr. Jacobs, "are one-third of what they would be if we were still using Eastern high-volatile coal in our mix." He estimated the savings at more than \$7 a ton on freight alone.



Hydro-Sonic Systems has announced the start-up of a mobile coke oven pushing emission control system at Lone Star Steel Company's new C Battery. The coke battery, consisting of 70 ovens, was designed and constructed by Koppers Company.

The gas cleaning system is guaranteed to capture outlet particulate down to 0.02 GR DSCF as measured at 20 percent opacity or less. It is powered by compressed air and does not require fans or other moving parts. System layout is straightforward and operation is simple. The car is designed for high utilization and high availability. Because the receiving chambers and ducts are close-coupled and tight to minimize excess air infiltration during system operation, the gas cleaning system at Lone Star only processes approximately 55,000 SCFM.

Air and water systems are recharged from land-based units while car is at the quench tower. Dirty water and slurry are drained to land-based treating basins while the car is at the quench tower. Normal operating cycle is 5 minutes, with 16 minutes between pushes. The gas cleaning system operates automatically, but has manual overrides.

Hydro-Sonic Systems is a Dallas-based company that designs, manufactures and markets specialized air pollution control equipment for heavy industry.

INTERNATIONAL ENERGY CONSERVATION MONTH



FACTS & FIGURES (DOMESTIC)

PRODUCTION	Oct. 6-79	Previous	Yr. Ago
Bituminous	16,285	16,290	16,645
Anthracite	125	115	135
RR carloadings, Bitum.	113,345	113,593	114,896
RR carloadings, Anthra.	674	591	1,893
Production in tons (000), week ended Sept. 8			
Carloadings in R.R. cars, week ended Sept. 8			

Source: U.S. Dept. of Energy, Energy Information Administration - Weekly Coal Report, Association of American Railroads, Car Service Division - Statement CS-54A

By States (Bituminous and Lignite)	9/15/79	9/8/79	9/16/78
Alabama	550	484	519
Georgia	10	15	13
Illinois	1,170	904	1,185
Indiana	530	456	697
Kentucky	2,183	1,475	2,280
Eastern	1,099	805	1,134
Western	3,282	2,280	3,414
Total Ky.	98	108	99
Maryland	980	607	972
Ohio	2,103	1,840	2,265
Pennsylvania	247	185	317
Tennessee	1,030	760	841
Virginia	2,085	1,957	1,822
West Virginia	12,085	9,596	12,144
Total, Eastern			

Western	9/15/79	9/8/79	9/16/78
Alaska	15	15	15
Arizona	230	250	280
Arkansas	17	15	19
Colorado	300	296	332
Iowa	16	9	14
Kansas	15	10	13
Missouri	127	115	178
Montana	762	676	843
New Mexico	250	256	246
North Dakota	343	259	223
Oklahoma	136	119	146
Texas	519	350	395
Utah	257	240	254
Washington	95	90	115
Wyoming	1,388	2,004	1,243
Total, Western	4,470	4,704	4,316
Total, United States	16,555	14,300	16,460

In short tons (000), week ended Aug. 11
Source: Dept. of Energy, Energy Information Administration - Weekly Coal Report

Work Force	Aug. 1979	July 1979	Aug. 1978
All employees	260.4	256.6	250.2
Coal mining	257.4	255.6	247.2
Bituminous & lignite	218.4	215.9	208.7
Production employees	215.7	213.2	206.1
Coal mining			
Bituminous & lignite			

Workers in (000), Preliminary	Aug. 1979	July 1979	Aug. 1978
Coal mining	40.0	40.0	40.0
Bituminous & lignite	40.0	40.0	40.0
Production employees			
Coal mining			
Bituminous & lignite			

Source: U.S. Army, Corps of Engineers, Pittsburgh District

Earnings, hourly avg in \$	Latest	Previous	Yr. Ago
Coal mining	10.31	10.31	9.67
Bituminous & lignite	10.34	10.34	9.69

Note: Aug. 1979 data is preliminary; all data on revised basis.

Earnings, weekly average	Latest	Previous	Yr. Ago
Coal mining	412.40	391.03	386.80
Bituminous & lignite	413.60	392.15	387.60

TRANSPORTATION	Week ended	9/29/79	10/7/78
Eastern district	1,999	1,755	1,367
Bessemer and Lake Erie	6,087	6,592	7,703
Baltimore and Ohio	13,648	13,564	18,585
Chesapeake and Ohio	8,957	10,440	10,171
Consolidated Rail Corp.	16,331	18,437	14,211
Illinois Terminal	495	194	667
Norfolk and Western	2,030	1,975	1,541
Pittsburgh & Lake Erie	11	16	27
Western Maryland	49,558	52,973	54,302
Other, eastern district			
Total, eastern district			

Southern district	9/8	9/1	Yr. Ago
Clinchfield Railroad	1,810	2,050	1,821
Illinois Central Gulf	4,284	3,271	5,506
Louisville & Nashville	15,018	14,338	15,324
Southern Railway	6,785	8,173	7,444
Other, southern district	3	—	8
Total, southern dist.	27,900	27,832	30,103

Western district	10/6/79	9/29/79	10/7/78
Atchafalaya & Santa Fe	19,078	17,416	14,436
Burlington Northern	532	539	861
Chicago & North Western	3,241	3,411	3,091
Denver & Rio Grande Wstrn	120	187	32
Kansas City Southern	1,368	827	994
Chicago, Milwaukee	246	282	239
St. Paul & Pac.	4,766	3,896	4,118
Missouri-Kansas-Texas	79	71	464
Chicago, Rock Is. & Pacific	727	855	963
St. Louis-San Francisco	150	111	123
Union Pacific	3,858	3,522	3,869
Other, western district	22	5	247
Total, western district	35,887	32,788	30,493
Railroad revenue freight loaded	113,345	113,593	114,896

Statement CS-34A			
Inland Rivers			
Monongahela River, Lock 3	310,800	364,838	391,642
Allegheny River, Lock 2	31,500	32,400	42,300
Ohio River, Mtgmry Lock	208,400	503,993	—
In short tons through locks, week ended Sept. 15, 1979			
Source: U.S. Army, Corps of Engineers, Pittsburgh District			

CONSUMPTION	July 1979	June 1979	July 1978
Electric power utilities	48,126	43,906	44,033
Bunker, foreign & lake vessel	1	1	1
Manufacturing & mining industries:			
Beehive coke plants	48	54	39
Oven coke plants	6,350	6,093	6,491
Steel & rolling mills	238	265	295
Other mfg. and mining industries	3,893	3,924	4,117
including cement	58,656	54,243	54,976
Total, industrial	349	409	450
Retail deliveries	59,005	54,652	55,426
Total, all consumption			
In short tons (000),			

USER STOCKS	July 1979	June 1979	July 1978
Electric power utilities	128,652	134,152	107,455
Manufacturing & mining industries:			
Oven coke plants	8,115	9,449	6,604
Steel & rolling mills	343	292	210
Other mfg. and mining industries	6,463	6,411	5,244
including cement	143,573	150,303	119,513
Total, industrial	372	327	290
Retail dealer stocks	143,945	150,630	119,803
Total, all stocks of coal			
In short tons (000),			

Days' Supplies	9/8	9/1	Yr. Ago
Electric power utilities	1,810	2,050	1,821
Manufacturing & mining industries	4,284	3,271	5,506
Oven coke plants	15,018	14,338	15,324
Steel & rolling mills	6,785	8,173	7,444
Other mfg. and mining industries	3	—	8
Total, industrial	27,900	27,832	30,103
Retail dealer stocks			
Total, all coal users			

1,700	1,666	1,056
19,078	17,416	14,436
532	539	861
3,241	3,411	3,091
120	187	32
1,368	827	994
246	282	239
4,766	3,896	4,118
79	71	963
727	855	464

USERS' OUTPUT	Major direct users	Electric utilities (Mil. Kw.)	40,940	41,347	40,042
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Steel (short tons-000) Oct. 13	2,412	2,404	2,739		
Cement, Portland					
U.S. shipments, Aug. 79	7,773,279	7,939,759	8,893,790		
Other significant output:					
Aluminum, order receipts (Mil. lbs.)					
5-week moving aver.					
(week Sept. 28)	235	228	283		
Annual rate, Sept. 28	12,220	11,856	14,716		
Motor vehicle production,					
Total (week Oct. 13)	209,984	209,140	292,714		
Machine tools					
Net new orders Aug. 79	429,150	362,100	374,800		
Shipments Aug. 79	290,600	267,700	215,400		
Utilities—week ended Sept. 15	Steel—week ended Sept. 15				
Cement—month ended July	Machine Tools—month ended July				
Source: Edison Electric Institute, American Iron & Steel Institute, U.S. Dept. of Interior, Bureau of Mines, Div. Nonmetallic Minerals, Aluminum Association, Motor Vehicle Manufacturers Assoc., National Machine Tool Builders Assoc.					

Imports	Latest	Previous	Yr. Ago
Bituminous coal	—	—	—
Australia	—	—	129,770
Canada	74	724	44
Poland	26,461	—	28,602
South Africa	22,200	134,010	111,089
Total, all nations	48,735	134,734	269,505

Coke, suitable for fuel	Latest	Previous	Yr. Ago
Belgium	32,325	17,137	—
Canada	17,078	8,541	7,706
Colombia	—	—	2,685,387
France	33,599	50,645	11,574
Germany, F.R. (West)	257,314	341,248	530,590
Italy	17,912	—	1,558,377
Japan	107,473	148,553	—
Netherlands	—	—	37,481
Norway	—	—	—
Sweden	—	—	—
United Kingdom	—	—	17,029
Total, all nations	465,701	566,124	604,380

Compositions	Latest	Previous	Yr. Ago
Germany, F.R. (West)	2,461	4,497	1,442
France	2,461	4,497	1,442
Italy	—	—	—
Japan	—	—	—
Netherlands	—	—	—
Norway	—	—	—
Sweden	—	—	—
United Kingdom	—	—	—
Total, all nations	4,922	8,994	2,884

Coal, other including lignite	Latest	Previous	Yr. Ago
Australia	—	—	—
Canada	3,758	4,363	3,542
China, Taiwan	—	—	—
Germany, F.R. (West)	—	—	—
Hong Kong	—	—	—
Ireland	—	—	—
Japan	—	—	—
Mexico	20	—	2,560
Netherlands	44	—	1,202
Poland	35,591	69,855	39,824
South Africa	—	—	1,286,718
Total, all nations	39,413	74,218	43,366

In short tons, month ended July 1979	Latest	Previous	Yr. Ago
Source: Data derived from that presented in U.S. Dept. of Commerce, Bureau of the Census, Foreign Trade Division - IM 145X			

Imports	Latest	Previous	Yr. Ago
Bituminous coal	—	—	—
Australia	—	—	3,212,384
Canada	74	724	44
Poland	26,461	—	28,602
South Africa	22,200	134,010	111,089
Total, all nations	48,735	134,734	269,505

Coke, suitable for fuel	Latest	Previous	Yr. Ago
Belgium	32,325	17,137	—
Canada	17,078	8,541	7,706
Colombia	—	—	2,685,387
France	33,599	50,645	11,574
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Italy	17,912	—	1,558,377
Japan	107,473	148,553	—
Netherlands	—	—	37,481
Norway	—	—	—
Sweden	—	—	—
United Kingdom	—	—	17,029
Total, all nations	465,701	566,124	604,380

Compositions	Latest	Previous	Yr. Ago
Germany, F.R. (West)	2,461	4,497	1,442
France	2,461	4,497	1,442
Italy	—	—	—
Japan	—	—	—
Netherlands	—	—	—
Norway	—	—	—
Sweden	—	—	—
United Kingdom	—	—	—
Total, all nations	4,922	8,994	2,884

Coal, other including lignite	Latest	Previous	Yr. Ago
Australia	—	—	—
Canada	3,758	4,363	3,542
China, Taiwan	—	—	—
Germany, F.R. (West)	—	—	—
Hong Kong	—	—	—
Ireland	—	—	—
Japan	—	—	—
Mexico	20	—	2,560
Netherlands	44	—	1,202
Poland	35,591	69,855	39,824
South Africa	—	—	1,286,718
Total, all nations	39,413	74,218	43,366

In short tons, month ended July 1979
Source: Data derived from that presented in U.S. Dept. of Commerce, Bureau of the Census, Foreign Trade Division - IM 145X

(IMPORTS)

Previous	Yr. Ago	Latest	Previous	Yr. Ago	Latest	Prev. Yr. Ago
—	129,770	—	—	3,212,384	—	24,75
724	44	6,142	65,797	3,740	83,00	90,88
—	28,602	842,328	—	915,200	31,83	—
34,010	111,089	444,000	2,835,309	2,196,238	20,00	21,16
34,734	269,505	1,292,470	2,901,106	6,327,562	26,52	21,53
—	—	—	—	—	—	—
17,137	—	2,685,387	1,490,897	—	83,07	87,00
8,541	7,706	1,420,443	668,465	535,821	83,17	87,27
—	—	—	—	—	—	69,52
50,645	11,574	2,966,147	4,325,927	919,827	88,28	85,42
41,248	530,590	21,573,670	28,570,883	42,368,363	83,84	83,72
—	—	1,558,377	—	—	87,00	79,85
48,553	—	9,348,416	12,348,167	—	86,98	83,12
—	37,481	—	—	2,982,029	—	79,56
—	—	—	—	—	—	—
—	17,029	—	—	1,297,737	—	76,21
66,124	604,380	39,552,440	47,404,340	48,103,577	84,93	83,73
4,497	1,442	67,076	114,071	41,664	27,26	25,37
4,497	1,442	67,076	114,071	41,664	27,26	25,37
—	—	—	—	—	—	28,89
4,363	3,542	112,775	134,373	107,514	30,01	30,80
—	—	—	—	—	—	30,35
—	—	—	—	—	—	—
—	—	2,560	—	—	128,00	—
—	—	1,202	—	—	27,31	—
69,855	39,824	1,286,718	2,025,805	1,035,450	36,15	28,76
—	—	—	—	—	—	26,00
74,218	43,366	1,403,255	2,160,178	1,142,964	35,60	29,11
—	—	—	—	—	—	26,36

U. S. Dept. of Commerce, Bureau of the Census, Foreign Trade Division - IM

COAL	150.9	149.9	153.4	- 1.6%
OIL	250.8	255.8	201.1	+24.7%
GAS	233.9	224.0	184.2	+27.0%

MIDDLE ATLANTIC		Coal	121.9	123.7	116.4	+ 4.7%
		Oil	273.7	266.4	210.9	+29.8%
		Gas	190.1	179.3	161.5	+17.7%

Oil	307.2	302.5	260.3	+18.0%
Gas	244.3	242.3	191.8	+27.4%

WEST NORTH CENTRAL	Coal	96.5	95.6	87.6	+12.4%
Oil	277.0	246.4	198.1		